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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,954	04/26/2000	Tetsu Sugaya	FUJI-17.289	3014

7590 04/15/2004

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575 Madison Ave.  
New York, NY 10022-2585

EXAMINER
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PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/558,954

Applicant(s)

SUGAYA ET AL.

Examiner

Justin M Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed February 10, 2004 have been fully considered but they are not persuasive.

Applicant argues (page 10) that AAPA's disclosure of a wireless LAN cannot suggest CSMA operation. Specifically, applicant argues that in applicant's invention, links for terminals are formed with initialization of the transmission path and persist while the path remains active, as discussed on page 24 of applicant's specification. Applicant continues arguing, stating that applicant's invention enables terminal devices to receive connection-oriented communication services without requiring a dedicated transmission path to be captured for each terminal, which reduces wireless network infrastructure, not provided by AAPA. However, these features of applicant's invention are not clearly evident in the present claim language, specifically in claim 1. Thus, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., links for terminals are formed with initialization of the transmission path and persist while the path remains active, and terminal devices are enabled to receive connection-oriented communication services without requiring a dedicated transmission path to be captured for each terminal, which reduces wireless network infrastructure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus, applicant's argument is not persuasive.

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Additionally, in regards to applicant's argument that AAPA's disclosure of a wireless LAN cannot suggest CSMA operation, as discussed in the previous office action and repeated herein, CSMA is well known in the art as an operation for local area networks. For further support of this assertion, IEEE begins the standard definition of *carrier sense* with, "In a local area network, ..." and begins the standard definition of *carrier sense multiple access with collision detect* (CSMA/CD) with, "A local area network access technique. ..." ("IEEE 100: The Authoritative Dictionary of IEEE Standards Terms, Seventh Edition", IEEE 2000). Thus, CSMA is clearly well known in the art as an operation for local area networks. Thus, by disclosing that applicant's prior art terminal device is a LAN (local area network) device, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply CSMA as an operation for the local area network device since it is well known in the art to utilize CSMA as an operation for local area networks, as confirmed by the above-mentioned IEEE reference. Thus, applicant's argument that AAPA's disclosure of a wireless LAN cannot suggest CSMA operation is not persuasive.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1, 2, 6, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed in the instant application (Figs. 1-6 and page 1, line 4 – page 8, line 19) in view of U.S. Patent No. 6,501,736 to Smolik et al.

Regarding claims 1, 6 and 14, the prior art disclosed in the instant application teaches a wireless terminal device (e.g., 134 in Fig. 1) comprising: a wireless interface part (e.g., 141) having an interface with a wireless transmission path at a physical layer (e.g., L1 at 134 in Fig. 6); a link forming part (e.g., 142) accessing the wireless transmission path via the wireless interface unit (e.g., 141) and forming a particular link on the wireless transmission path (e.g., see operations of 142 in FIG. 2); and a transmission/reception part (e.g., 140) transmitting and/or receiving transmission information via the particular link formed by the link forming part, the link forming part forming the particular link on the wireless transmission path when initiated (e.g., see page 1, line 4 – page 8, line 19).

However, the prior art disclosed in the instant application may not specifically require the wireless transmission path to be formed as a physical channel to which a CSMA system is applied, the CSMA system securing a given transmission quality with respect to a total of the number of links concurrently formable and the amount of the transmission information.

Smolik also teaches a wireless terminal device (e.g., at 201 in FIG. 2) communicating with a wireless communication system (e.g., at 202). Smolik further teaches the wireless communication system secures a given transmission quality (e.g., corresponding to transmission rate) with respect to a total number of the links currently formable and the amount of the transmission information (e.g., call carrying capacity, see col. 1, line 56 – col. 2, line 7). The teachings of Smolik provide increased capacity and accommodate varying conditions of traffic

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demands and desired quality of service (e.g., see col. 2, lines 31-38). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Smolik to the prior art disclosed in the instant application in order to provide increased capacity and accommodate varying conditions of traffic demands and desired quality of service.

However, the prior art disclosed in the instant application in view of Smolik may not specifically require the wireless communication system to be a CSMA system. However, the prior art of the instant application teaches that the wireless terminal device is a wireless LAN device attached to a PCMCIA slot of a personal computer (e.g., see col. 3, lines 13-16) and carrier sense multiple access (CSMA) is a well known standard method of communication for wireless LAN devices. Furthermore, it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize the CSMA standard in the system of the prior art disclosed in the instant application in view of Smolik, since it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability.

Regarding claim 2, the prior art disclosed in the instant application teaches the link forming part (e.g., 142) captures resources of an upper layer including a data link layer (e.g., IP layer at 134 in FIG. 6) in accordance with the physical layer (e.g., L2, L1) of the wireless transmission path at the time of forming the particular link.

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4. Claims 3-5 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed in the instant application in view of Smolik, further in view of U.S. Patent No. 6,442,151 to H'mimy et al.

Regarding claims 3, 7, 8 and 10, the prior art disclosed in the instant application in view of Smolik teach the device discussed above regarding claims 1, 6 and 14, and further, Smolik teaches a monitoring part for monitoring, for each link, the amount of the transmission information handled (e.g., transmitted/received in downlink/uplink) by the transmission/reception part (e.g., monitoring total power corresponding to the amount of transmission information, see col. 7, line 23 – col. 11, line 18), the link forming part changing, as to the particular link formed in advance, a transmission capacity (e.g., call capacity) to a value which ensures a predetermined transmission quality in accordance with the amount of the transmission information (e.g., see FIG. 4 and col. 9, line 27 – col. 10, line 36). As discussed above, the teachings of Smolik provide increased capacity and accommodate varying conditions of traffic demands and desired quality of service (e.g., see col. 2, lines 31-38). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Smolik to the wireless terminal device of the prior art disclosed in the instant application in order to provide increased capacity and accommodate varying conditions of traffic demands and desired quality of service.

However, the prior art disclosed in the instant application in view of Smolik may not specifically disclose alternatively substituting another link having another transmission capacity greater than that of the particular link.

H'mimy also teaches a wireless terminal device (e.g., 12 in FIG. 4) communicating with a wireless communication system (e.g., 14). H'mimy further teaches substituting another link having another transmission capacity greater than that of a first particular link (e.g., see col. 3, lines 23-34). The teachings of H'mimy provide improved uniformity of channel quality distribution in a system resulting in overall increased transmission quality and capacity (e.g., see col. 3, lines 57-62). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of H'mimy to the device of the prior art disclosed in the instant application in view of Smolik in order to improve uniformity of channel quality distribution and provide overall increased transmission quality and capacity.

Regarding claims 4 and 9, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and Smolik teaches transmission quality adjustments may be implemented via a man-machine interface input (e.g., see col. 10, lines 39-46 wherein setting thresholds may be performed manually).

Regarding claims 5 and 11, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and Smolik teaches the monitoring monitors a frequency of occurrence of a collision in the physical channel in CDMA (e.g., see col. 9, lines 19-30 regarding reaching a predetermined level of calls being blocked).

Regarding claim 12, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and H'mimy further teaches a memory part (e.g., database, see col. 10, line 38 – col. 11, line 3)



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which stores an amount of information assigned to a port number (e.g., corresponding to one of a plurality of channels), and a port number monitoring part (e.g., see col. 10, line 45 regarding monitoring) adding to the transmission information transmitted or received, wherein the link forming part changes based on the amount of transmission information stored in the memory part and related to the port number acquired by the port number monitoring port, and a transmission capacity of one of the individual links is formed in advance (e.g., see col. 10, lines 55-62 regarding preassignment algorithm) to a value which insures a predetermined transmission quality. As discussed above, the teachings of H'mimy provide improved uniformity of channel quality distribution in a system resulting in overall increased transmission quality and capacity (e.g., see col. 3, lines 57-62). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of H'mimy to the device of the prior art disclosed in the instant application in view of Smolik in order to improve uniformity of channel quality distribution and provide overall increased transmission quality and capacity.

Regarding claim 13, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and Smolik teaches transferring control information necessary for changing a transmission capacity (e.g., see col. 5, line 60 – col. 8, line 18 regarding the Service Option Control Order comprising the ORDQ field).

### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Justin M Philpott

  
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